Amendment to the Claims:

1. (Previously presented) A communications system comprising:

a plurality of mobile wireless units movably located within a defined space of a wireless local area network;

a plurality of fixed access points disposed at known locations in the defined space, each access point operating at a dedicated frequency different from the dedicated frequency of its nearest neighbor access points;

a means for tracking movement of at least one mobile unit within the defined space including:

a memory storing a map of the access points and relative signal strengths of signals from the access points at predefined locations in the defined space,

a means for scanning identified scanning frequencies of access points nearby a selected one of the mobile wireless units to measure actual signal strengths between the selected mobile unit and each of the nearby access points, and

a means for calculating a location of the selected mobile unit relative to the map by comparing the actual signal strengths with the map of relative signal strengths at predefined locations in the defined space;

a means for assigning the nearby access points with strongest signals at the calibrated location to the selected mobile unit based on the map of relative strengths in the defined space and communicating the dedicated frequencies of the nearby access points to the selected mobile unit;

wherein the tracking means tracks the movement of the selected mobile unit by periodically scanning the frequencies of the assigned access points adjacent the calculated location and predicts future locations of the selected mobile unit;

wherein the assigning means assigns the nearby access points based on the predicted location of the selected mobile unit and the map;

wherein the scanning means only scans the frequencies of the assigned nearby access points.

2-3. (Cancelled)

4. (Previously Presented) The system as set forth in claim 1, wherein the position tracking means includes:

a velocity estimating means for determining speed and direction of movement of the selected mobile unit.

5. (Cancelled)

6. (Previously Presented) The system as set forth in claim 1, further including:

a means for determining a degree of certainty of an accuracy of the calculated location.

7. (Previously presented) The system as set forth in claim 6, wherein the number of nearby access points assigned to the selected mobile unit is a function of location accuracy certainty and the tracking means tracks the movement of the at least one mobile unit by periodically scanning only the frequencies of the access points assigned to the selected mobile unit.

8. (Previously Presented) The system as set forth in claim 1, further including a means for creating the map including:

a means for measuring a plurality of initial signal strengths at predefined locations within the defined space;

a means for mapping the initial signal strengths in relation to predefined locations in the defined space;

a means for identifying locations and scanning frequencies of the access points in the defined space; and

a means for creating the map and loading in the memory.

9. (Currently amended) In a wireless local area network, a method ~~for handing off a selected mobile device from one access point to another, each access point having a dedicated frequency different from the dedicated frequency of nearby access points, the method~~ comprising:

tracking [[a]] movement of [[the]] a selected mobile device within [[the]] a defined space using wireless access points, each access point having a dedicated frequency different from the dedicated frequency of nearby access points, the tracking including[[:]] ~~scanning the dedicated frequencies assigned to each of an identified plurality of access points neighboring a last calculated location of the selected mobile device,~~ measuring actual signal strengths at ~~each of~~ the dedicated frequencies of a ~~assigned to~~ current plurality of the access points neighboring the last calculated location of the selected mobile device, and calculating a current location of the mobile device by comparing the measured actual signal strengths ~~at each of the frequencies assigned to the access points neighboring the last calculated location~~ with a predefined map of relative signal strengths at predefined locations in the defined space; ~~and~~

based on the predefined map and the calculated current location, identifying from the predefined map [[a]] an updated current plurality of the access points neighboring the current calculated location with the strongest signals at the current calculated location[[;]] and assigning the updated current plurality of the access points with strongest signals to the selected mobile device;

performing wireless communication with the selected mobile device using a communication access point selected from the access points; and

handing off the selected mobile device from one communication access point to another communication access point based on the predefined map and the calculated current location.

10. (Currently amended) The method as set forth in claim 9, ~~further including~~ wherein the measuring comprises:

~~identifying the dedicated frequencies assigned to access points which are nearest to the last calculated location of the selected mobile device; and~~

~~tracking the movement of the selected mobile device by~~ periodically ~~scanning~~ measuring only the dedicated frequencies of the access points nearest to the last calculated location.

11. (Currently amended) The method as set forth in claim 10, ~~further including~~ wherein the measuring comprises:

~~tracking the movement of the at least one mobile device by~~ periodically ~~scanning~~ measuring the dedicated frequencies of the current plurality of the access points neighboring the last calculated location of the selected mobile device wherein said current plurality consists of three of the access points nearest the last calculated location.

12. (Canceled)

13. (Currently amended) The method as set forth in claim 9, further including:

estimating ~~at least~~ a speed and a direction of movement of the selected mobile device based on the tracking including at least the calculated current location and the last calculated location; and

predicting a future location of the selected mobile device from the estimated speed and direction; ~~and~~

wherein the handing off is ~~reassigning the access points to the selected device~~ based on the predicted future location and the map.

14. (Previously Presented) The method as set forth in claim 9, further including, before tracking movement, generating the map by:

measuring a plurality of initial signal strengths at a plurality of measurement locations within a defined space;

mapping the initial signal strengths in relation to the plurality of measurement locations in the defined space;

identifying a plurality of locations and scanning frequencies of the access points located in the defined space; and

combining the signal strengths at the plurality of measurement locations and the access point locations and the frequency assigned to each access point into the map.

15. (Original) The method as set forth in claim 14, further including:

determining a certainty of an accuracy of the calculated location of the mobile device.

16. (Canceled)

17. (Original) The method as set forth in claim 15, further including:

comparing the determined certainty with a requested threshold.

18-20. (Canceled)

21. (Currently amended) The method as set forth in claim 15, wherein a number of the current plurality of the access points assigned to the selected mobile device ~~nearest access points~~ is a variable based on the determined certainty of the location calculation accuracy.

22-23. (Canceled)

24. (Currently amended) A communications system comprising:

a ~~plurality of~~ mobile wireless ~~units~~ unit located within a defined space of a wireless local area network;

a plurality of access points disposed at known locations in the defined space, each access point operating at a dedicated frequency;

a computer processor for tracking movement of the mobile ~~units~~ wireless unit and reassigning frequencies of closest access points to ~~each~~ the mobile wireless unit, the computer processor being programmed to perform the steps of:

~~scanning identified scanning frequencies corresponding to each of an identified plurality of nearby access points,~~

measuring actual signal strengths at ~~each of the identified~~ the dedicated frequencies of an identified plurality of nearby access points between the ~~at least one~~ mobile ~~device~~ wireless unit and the identified nearby access points,

calculating ~~at least~~ a location of the ~~at least one~~ mobile ~~device~~ wireless unit by comparing the actual signal strengths with a map of relative signal strengths at predefined locations in the defined space; ~~and~~

~~assigning~~ updating the identification of nearby access points with strongest signals to the ~~at least one~~ mobile wireless unit based on the calculated location and the map;

providing wireless communication service to the mobile wireless unit via a selected communication access point; and

handing off the mobile wireless unit from one selected communication access point to another selected communication access point based on the calculated location and the map.

25. (Previously Presented) The communication system as set forth in claim 24, further including:

a memory in which the map is stored and wherein the map depicts a location of each access point in defined space and relative signal strengths of signals from each of the access points at a multiplicity locations in the defined space.

26. (Currently amended) The communication system as set forth in claim 24, wherein the map is a predefined map generated ~~prior to tracking movement of the mobile units~~ by ~~the steps of~~:

measuring a plurality of initial signal strengths at a plurality of measurement locations within a defined space;

mapping the initial signal strengths in relation to the plurality of measurement locations in the defined space;

identifying a plurality of locations and scanning frequencies of the access points located in the defined space; and

combining the signal strengths at the plurality of measurement locations and the access point locations and the frequency assigned to each access point into the map.

27. (New) A method comprising:

communicating with a mobile device using a communication access point selected from the access points of a wireless local area network;

tracking movement of the mobile device within a defined space covered by the local area network by periodically (i) measuring signal strengths between the mobile device and access points of the wireless local area network and (ii) determining a location of the mobile device in the defined space based on the measured signal strengths and a predefined map of relative signal strengths at predefined locations in the defined space; and

handing off the mobile device from one selected communication access point to another selected communication access point based on the predefined map and the determined location of the mobile device.

28. (New) The method as set forth in claim 27, wherein the measuring operation (i) comprises:

measuring signal strengths between the mobile device and a selected subset of the access points of the wireless local area network.

29. (New) The method as set forth in claim 28, wherein the selected subset of access points of the wireless local area network consists of three access points of the wireless local area network.

30. (New) The method as set forth in claim 27, wherein:

the tracking further comprises predicting a future location of the mobile unit based on the periodically performed operations (i) and (ii); and

the handing off of the mobile device is based on the predicted future location of the mobile device.